REMARKS

Claim 1 has been amended to incorporate the recitations of claims 6 and 10, and claims 6 and 10 have been canceled accordingly.

Entry of the above amendment is respectfully requested.

Obviousness Rejection

On page 2 of the Office Action, claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of *AAPA* (Applicants' Admitted Prior Art) and The Handbook of Separation Techniques for Chemical Engineers 2nd Edition (1988).

In response, Applicants submit herewith the attached sheet with a table showing experimental data to support the above-described additional features presented in amended claim 1. Applicants are in the process of preparing a Rule 132 Declaration including the experimental data and will submit it promptly after it is completed.

As described in "Description of the Related Art" (see page 1, line 22 to page 2, line 5 in the present application in particular), when producing a cellulose acylate film used for a liquid crystal display device and a photosensitive material, filtration accuracy is required to be equivalent to or higher than the accuracy in a case that the filtering material (e.g., filtering paper) having an absolute filtration accuracy of approximately 0.01 mm is used.

However, as can be seen from Experiment No. 11, when conducting a filtration for a high-viscosity solution (generally 100 to 400 Poise) like a cellulose acylate solution, filtration life (filtering process amount) becomes extremely short. (In the following description, filtration life and quality of Experiment No. 11 will be used as reference.) Incidentally, foreign matters larger than 10 μm are detected in Experiment No. 11 even though a filtering paper of absolute

filtration accuracy 0.01 mm (10 μm) is used, because the absolute filtration accuracy deteriorates in filtering a gelled liquid such as a cellulose acylate solution.

In contrast, *by performing, prior to the filtering step, a step of precoating the filtration support in a thickness of from 0.1 to 10 mm using a precoat liquid in which a filter aid having an average particle size in a range of from 1 to 150 μm is dispersed* as recited in amended claim 1, a filtration accuracy equivalent to or higher than an accuracy of filtering using filtering material with absolute filtration accuracy of 0.01 mm can be achieved, and filtration life (filtering process amount) can be extended.

Specifically, the quality of Example C (Experiment No. 7) is substantially equivalent to the reference quality, and the quality of Examples A, B, D, and E are better than the reference quality.

In addition, filtration life (relative value when the filtration life of Example A is defined as 1.0) is significantly longer than the reference value (i.e., 0.4) in all Examples A to E.

On the other hand, Comparative Examples a to d are examples in which the condition of average particle size or precoat thickness of the present invention is not satisfied, and as can be seen from these Comparative Examples, filtering quality can be improved when the average particle size is small and precoat thickness is thick, but filtration life becomes extremely short under that condition. When the average particle size is large and precoat thickness is thin, filtration life can be extended but filtering quality extremely deteriorates.

That is, according to the amended claim 1, filtration accuracy equivalent to or higher than that provided by filtering material having 0.01 mm of absolute filtration accuracy can be achieved, while filtration life (filtering process amount) can be significantly improved.

As described above, the average particle size of filtering aid and precoat thickness are extremely important in improving filtering capability and filtration life, and such is not disclosed or suggested in The Handbook of Separation Techniques for Chemical Engineers, 2nd Edition (1988).

Accordingly, Applicants submit that the invention as recited in amended claim 1 is not prima facie obvious, and further it is not obvious because it provides unexpectedly superior results.

Further, with respect to dependent claim 4 in particular, it is noted that The Handbook of Separation Techniques for Chemical Engineers cited by the Examiner indicates that ground wood pulp (which the Examiner appears to be considering as a cellulose-based aid) is used in a number of specialty applications where siliceous materials cannot be used.

Accordingly, it is submitted that the cited art neither teaches nor suggests the combined use of a cellulose-based aid and an aid including SiO_2 in an amount of 50% or more as recited in dependent claim 4. In this regard, it is noted that the present application discloses at the bottom of page 2 that a mixture of a cellulose-based aid and an aid including SiO_2 in an amount of 50% or more is preferably used, and that such a mixture system can form a robust cake layer.

Thus, Applicants submit that the present invention is not obvious, and withdrawal of this rejection is respectfully requested.

Rejection under 35 U.S.C. 112, First Paragraph

On page 5 of the Office Action, claims 1-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

In particular, the Examiner indicates that the recitation "coarse-mesh" as it appears in amended claim 1 does not appear to be supported by the originally filed specification.

In response, and to expedite allowance, Applicants have deleted the "coarse-mesh" recitation. Accordingly, Applicants submit that this rejection has been obviated, and withdrawal of this rejection is respectfully requested.

Rejection under 35 U.S.C. 112, Second Paragraph

On page 5 of the Office Action, claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

In particular, the Examiner indicates that the recitation "coarse" as it appears in amended claim 1 is relative and subjective, and thus is subject to numerous possible interpretations.

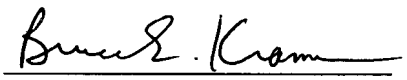
In response, and to expedite allowance, Applicants have deleted the "coarse-mesh" recitation. Accordingly, Applicants submit that this rejection has been obviated, and withdrawal of this rejection is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: September 24, 2007

Attached Sheet: Experimantal Data
U.S. Patent Application No. 10/620,412

Experiment No.	Sample Name	Average Particle Size of Filtering Aid (μm)	Initial Filtering Pressure (Mpa)	Filtration Life (*4)	Filtering Quality (Number of foreign materials remaining in the filtered liquid)			Precoat Thickness (mm)
					over 20 μm	20 to 10 μm	under 10 μm	
1	Comparative Example a	0.5	0.80	0.50	0	2	2	2
2	Comparative Example b	155	0.20	1.20	4	20	22	2
3	Comparative Example c	70	1.00	0.10	0	1	1	15
4	Comparative Example d	70	0.05	–	Failure	Failure	Failure	0.05
5	Example A	70	0.30	1.00	0	9	3	2
6	Example B	1	0.50	0.70	0	2	4	2
7	Example C	150	0.21	1.15	3	19	20	2
8	Example D	70	0.25	1.20	0	9	5	1
9	Example E	70	0.73	0.75	0	8	2	10
10	*2			1.00	4	21	25	–
11 (*1)	*3			0.40	1	10	15	–

*1: Reference case
*2: Filtering is performed only by a filtering paper of absolute filtering accuracy of 40μm
*3: Filtering is performed only by a filtering paper of absolute filtering accuracy of 10μm
*4: Relative value when the duration of Example A is set as 1.0

Remarks
(i) In the Comparative Example a, filtering quality data are added to a result of Example 3 described in the specification.
(ii) In the Comparative Example b, filtering quality data are added to a result of Example 2 described in the specification.
(iii) In the Comparative Example c, filtering quality data are added to a result of Example 7 described in the specification.
(iv) The Comparative Example d shows data that is newly added.
(v) In the Example A, filtering quality data are added to a result of Example 1 described in the specification.
(vi) The Examples B, C, D, and E shows data that are newly added.
(vii) In the Experiment Nos. 10 and 11, filtering is performed without filtering aid and only by filtering paper.